REMARKS/ARGUMENTS

Claims 1-44 are pending in the present application, of which Claims 1, 11, 14, 16-21, 23, 25, 33 and 35-44 are the independent claims. No claim amendment is made, and no new claims are added herein. Reconsideration and further examination are respectfully requested.

Claim Rejections – 35 USC § 102

Claims 11, 13, 16, 18, 20, 23, 24, 33, 34, 36, 38, 40, 42, and 44 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by US Patent No. 6,061,359 ("Schilling"). These rejections are respectfully traversed, and reconsideration and withdrawal of these rejections are respectfully requested. Among the claims noted above, Claims 11, 16, 18, 20, 23, 33, 36, 38, 40, 42, and 44 are independent claims.

Independent Claims 11, 18 and 23

Claim 11 recites, among other things, the following limitations: a first encoder for receiving the plurality of symbol streams and encoding each of the symbol streams with one of a plurality of covering sequences to form a plurality of covered sequences; a summer for summing the plurality of covered sequences to form a CDM signal; a time multiplexer for receiving the plurality of covered CDM signals and forming a Time Division Multiplexed (TDM) signal comprising the plurality of covered CDM signals; and a second encoder for covering the TDM signal with a covering sequence to form a covered TDM/CDM signal configured for transmission in CDM fashion. Claims 18 and 23 recite similar limitations.

Schilling is not understood to disclose the features of Claims 11, 18 and 23. The Office Action contends that the "first encoder" corresponds to elements 51, 52, 58, 151, 152, and 158 of Figure 3 of Schilling, that the "summer" corresponds to elements 45 and 145 of Figure 3, and that the "second encoder" corresponds to elements 48 and 148 of Figure 3. Referring to Table 4 of Schilling, the Office Action states, "Duplex method is TDD and Multiple access method is CDMA thus transmitted as TDD/CDM signal." The Office Action, however, does not point to any elements of Schilling that show a "time multiplexer." Instead, the Office Action relies on the listing of "Time Division Duplex" in Table 4 as showing this element.

Furthermore, the Office Action fails to show the "second encoder for covering the TDM signal with a covering sequence to form a covered TDM/CDM signal," as recited in Claim 11. Applicant submits that the in-phase multiplier device 48 and the quadrature-phase multiplier device 148, illustrated in Figure 3 of Schilling, do not cover a TDM signal with a covering

sequence, as is required by Claim 11. Further, Schilling does not describe that either the in-phase multiplier device 48 or the quadrature-phase multiplier device 148 utilizes a covering sequence, as is required by Claim 11. The Office Action merely points to Table 4 of Schilling and fails to point to any description in Schilling that describes covering a "TDM signal with a covering sequence to form a TDM/CDM signal," as recited in Claim 11. At most, the Office Action describes elements 51, 52, 58, 151, 152, and 158 (alleged first encoder) and elements 45 and 145 (alleged summer) and Table 4. However, the Office Action fails to cite any description from Schilling, and does not provide any other reason, describing why the "CDMA" listed in Table 4 would be interpreted to disclose a CDM signal other than the CDM signal which the Office Action purports is created by elements 45 and 145 of Figure 3.

Accordingly, Schilling is not understood to disclose every element of Claim 11, which is believed to be in condition for allowance. For at least reasons similar to those described above with respect to Claim 11, Schilling is not understood to disclose the features of independent Claims 18 and 23, which are also believed to be in condition for allowance.

Independent Claims 33, 38 and 42

Claim 33 recites, among other things, the following limitations: summing subsets of the plurality of covered sequences to form a plurality of CDM signals; time division multiplexing the plurality of CDM signals to form a TDM signal; and covering the first TDM signal with a covering sequence to form a covered TDM/CDM signal. Claim 42 recites similar limitations as Claim 33. Claim 38 recites, among other things, the following limitations: means for summing subsets of the plurality of covered. sequences to form a plurality of CDM signals; means for time division multiplexing the plurality of CDM signals to form a TDM signal; and means for covering the first TDM signal with a covering sequence to form a covered TDM/CDM signal.

Schilling is not understood to disclose the features of Claims 33, 38, and 42. In rejecting these claims, the Office Action cites the same elements and uses the same reasoning as those used to reject Claims 11, 18, and 23. Similar to Claims 11, 18, and 23, the Office Action has not shown that Schilling discloses at least the feature of "covering the first TDM signal with a covering sequence to form a covered TDM/CDM signal." Accordingly, Applicant respectfully submits that Claims 33, 38, and 42 are allowable over Schilling.

Independent Claims 16 and 20

Claim 16 recites, among other things, the following limitations: a CDM signal, covered with a first covering sequence, comprising one or more TDM signals, each of the one or more TDM signals comprising one or more sub-CDM signals, ... a receiver for receiving the CDM signal; a first despreader for despreading the received CDM signal with the first covering sequence to produce a despread CDM signal; and a demultiplexer for selecting one of the TDM signals from the despread CDM signal. Claim 20 recites similar limitations as Claim 16.

The Office Action states that in Figure 4 of Schilling, "antenna 77 receives, signal as coded by Fig. 3." As described above, Schilling does not describe "a CDM signal, covered with a first covering sequence, comprising one or more TDM signals, each of the one or more TDM signals comprising one or more sub-CDM signals." Further, Applicant respectfully submits that Schilling does not describe a structure to receive and despread such signal. In particular, Schilling does not describe the "first despreader" and the "demultiplexer for selecting one of the TDM signals from the despread CDM signal," as recited in Claim 16. Accordingly, Applicant respectfully submits that Claims 16 and 20 are allowable over Schilling.

Independent Claims 36, 40 and 44

Claim 36 recites, among other things, the following limitations: receiving a CDM signal; despreading the received CDM signal with a first covering sequence; time demultiplexing the despread received CDM signal to select a TDM signal; and despreading the selected TDM signal with a second covering sequence. Claim 44 recites similar limitations as Claim 36. Claim 40 recites, among other things, the following limitations: means for receiving a CDM signal; means for despreading the received CDM signal with a first covering sequence; means for time demultiplexing the despread received CDM signal to select a TDM signal; and means for despreading the selected TDM signal with a second covering sequence.

In rejecting Claims 36, 40, and 44, the Office Action uses reasons similar to those used to reject Claims 16 and 20. Applicant respectfully submits that the Office Action has not shown that Schilling discloses at least the feature of "time demultiplexing the despread received CDM: signal to select a TDM signal." Accordingly, Applicant respectfully submits that Claims 36, 40, and 44 are allowable over Schilling.

Dependent Claims 13, 24, and 34

Claims 13, 24, and 34 are dependent from their respective independent Claims 11, 23, and 33 discussed above and therefore are believed to be allowable over the applied reference for at least similar reasons. Because each dependent claim is deemed to define an additional aspect of the invention, the individual consideration of each on its own merits is respectfully requested.

Claim Rejections – 35 USC § 102

Claims 14, 15, 19, 35, 39 and 43 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by US Patent No. 5,914,950 ("Tiedemann"). These rejections are respectfully traversed, and reconsideration and withdrawal of these rejections are respectfully requested. Among the claims noted above, Claims 14, 19, 35, 39 and 43 are independent claims.

Independent Claims 14 and 19

Claim 14, recites, among other things, the following limitations: a CDM signal, covered with a first covering sequence, comprising two or more sub-CDM signals, each of the two or more sub-CDM signals comprising a plurality of symbol sequences for reception by respective ones of a plurality of mobile stations, and a decoder for extracting the recovered symbol sequence from the plurality of symbol sequences for reception by respective ones of a plurality of mobile stations, the recovered symbol sequence being directed to the respective one of the mobile stations. Claim 19, recites similar limitations to Claim 14.

The Office Action contends that element 40 in Figure 4 of Tiedemann corresponds to the "first despreader." The Office Action contends that the text in column 7 of Tiedemann describes the "second despreader."

Tiedemann is directed to a method and apparatus for reverse link scheduling in a cellular telephone system. It describes that channel element 40 is located at base station 4. *See* col. 7. ll. 9-13. Base station 4 receives a signal from remote station 6, which signal is demodulated with the channel element 40. *See* col. 7, ll. 13-21. The signal from the remote station 6 may be a high speed data transmission to the base station 4. *See* col. 6, ll. 40-42.

The signal transmitted by the remote station 6 and received by the base station 4 does not comprise "a CDM signal, covered with a first covering sequence, comprising two or more sub-CDM signals, each of the two or more sub-CDM signals comprising a plurality of symbol sequences for reception by respective ones of a plurality of mobile stations," as recited in Claims 14 and 19. For example, the signal transmitted by the remote station 4 does not comprise a

plurality of symbol sequences for reception by respective ones of a plurality of mobile stations. The signal is for reception by the base station 4, not for reception by respective ones of a plurality of mobile stations. Even when several base stations receive the signal transmitted by the remote stations 4, for example during handoff, the signal does not comprise a plurality of symbol sequences for reception by respective one or a plurality of mobile stations. Further, Applicant respectfully submits that Tiedemann discloses neither "a decoder" nor a recovered symbol sequence being directed to the respective one of the mobile stations," as recited in Claims 14 and 19. Accordingly, Applicant respectfully submits that Claims 14 and 19 are allowable over Tiedemann.

Independent Claims 35, 39 and 43

Claim 35, recites, among other things, the following limitations: receiving a CDM signal, covered with a first covering sequence, comprising two or more sub-CDM signals, each of the two or more sub-CDM signals comprising a plurality of symbol sequences for reception by respective ones of a plurality of mobile stations, and to extracting the decoded symbol sequence from the plurality of symbol sequences for reception by respective ones of a plurality of mobile stations, the decoded symbol sequence being directed to the respective one of the mobile stations. Claim 43, recites similar limitations as Claim 35. Claim 39, recites, among other things, the following limitations: means for receiving a CDM signal, covered with a first covering sequence, comprising two or more sub-CDM signals, each of the two or more sub-CDM signals comprising a plurality of symbol sequences for reception by respective ones of a plurality of mobile .stations covered by a second plurality of covering sequences, respectively, and means for extracting the decoded symbol sequence from the plurality of symbol sequences for reception by respective ones of a plurality of mobile stations, the decoded symbol sequence being directed to the respective one of the mobile stations.

Tiedemann is not understood to disclose the features of Claims 35, 39, and 43. In rejecting these claims, the Office Action cites the same elements and uses the same reasoning as those used to reject Claims 14 and 19. As described above, Tiedemann does not disclose at least "receiving a CDM signal ... comprising a plurality of symbol sequences for reception by respective ones of a plurality of mobile stations." Further, Applicant respectfully submits that Tiedemann does not disclose at least extracting a "decoded symbol sequence being directed to

the respective one of the mobile stations." Accordingly, Applicant respectfully submits that Claims 35, 39, and 43 are allowable over Tiedemann.

Dependent Claim 15

Claim 15 is dependent from independent Claim 14 discussed above and therefore is believed to be allowable over the applied reference for at least similar reasons. Because a dependent claim is deemed to define an additional aspect of the invention, the individual consideration of the dependent claim on its own merits is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 1, 2, 4, 5, 7, 10, 17, 21, 22, 25-28, 30, 32, 37 and 41 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Tiedemann in view of US Patent No. 6,751,264 ("Ho"). Claims 3 and 31 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Tiedemann in view of Ho and US Patent No. 6,134,215 ("Agrawal"). Claims 6 and 29 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Tiedemann in view of Ho and US Patent No. 6,389,056 (hereinafter "Kanterakis"). Claim 12 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Schilling in view of Tiedemann. These rejections are respectfully traversed, and reconsideration and withdrawal of these rejections are respectfully requested. Among the claims noted above, Claims 1, 17, 21, 25, 37, and 41 are independent claims.

Independent Claims 1, 17 and 21

Claim 1 recites, among other things, the following limitations: a first encoder for receiving a plurality of symbol streams for respective ones of a plurality of mobile stations and encoding each of the symbol streams with one of a plurality of covering sequences to form a plurality of covered sequences. Claims 17 and 21 recite similar limitations as Claim 1.

The Office Action contends that elements 146 and 148 of Figure 5 of Tiedemann correspond to the "first encoder," and alleges that "Col. 26, lines 40-50 describe each encoder is for a different channel thus plurality of encoders are associated with a plurality of devices." Applicant respectfully disagrees.

Tiedemann describes a modulator 74 in the remote station 6. *See* col. 6, 11. 54-58. The modulator 74 comprises a plurality of Walsh modulators 146 and 148 assigned to receive outputs from a plurality of BPSK and QPSK channel encoders 104 and 106. *See* col. 26, 11. 40-45. Each pairing of a channel encoder with a Walsh modulator is referred to as a secondary code channel.

See col. 26, ll. 45-50. The remote station 6 may communicate with a cell 2 using multiple secondary channels via the corresponding base station 4 of that cell. *See* col. 5, l. 65 — col. 6, l. 5, col. 24, ll. 1-29. Thus, the data being encoded using the secondary channels are all for the base station 4, not "for respective ones of a plurality of mobile stations," as recited in Claims 1, 17, and 21. Thus, Tiedemann is not understood to disclose or teach the features of Claims 1, 17, and 21 recited above.

Ho is cited in the Office Action as teaching "a selector for selecting the summer from among a plurality of summers." The Office Action, however, does not allege that Ho teaches "a first encoder for receiving a plurality of symbol streams for respective ones of a plurality of mobile stations and encoding each of the symbol streams with one of a plurality of covering sequences to form a plurality of covered sequences." Ho is directed to a digital FM receiver having multiple antennas, where signal pairs can be received using the antennas and the stronger of the received signals can be selected. Ho is not understood to disclose or teach at least the "first encoder" as recited above.

Accordingly, Tiedemann and Ho, either alone or in combination, are not understood to disclose, teach, or suggest the features of independent Claims 1, 17, and 21, which are believed to be in condition for allowance.

Independent Claims 25, 37 and 41

Claim 25 recites, among other things, the following limitations: covering each of a plurality of symbol streams for respective ones of a plurality of mobile stations with one of a plurality of covering sequences to form a plurality of covered sequences. Claim 41 recites similar limitations as Claim 25. Claim 37 recites, among other things, the following limitations: means for covering each of a plurality of symbol streams for respective ones of a plurality of mobile stations with one of a plurality of covering sequences to form a plurality of covered sequences.

Tiedemann is not understood to disclose or suggest the features of Claims 25, 37, and 41. In rejecting these claims, the Office Action cites the same elements and uses the same reasoning as those used to reject Claims 1, 17, and 21. As described above, Tiedemann is not understood to disclose or suggest at least the feature of "covering each of a plurality of symbol streams for respective ones of a plurality of mobile stations with one of a plurality of covering sequences to

form a plurality of covered sequences." Further, Ho does not remedy the foregoing deficiencies of Tiedemann.

Accordingly, Tiedemann and Ho, either alone or in combination, are not understood to disclose, teach, or suggest the features of independent 25, 37, and 41, which are believed to be in condition for allowance.

Dependent Claims 2-7, 10, 12, 22 and 26-32

Claims 2-7, 10, 12, 22 and 26-32 are dependent from their respective independent Claims 1, 11, 21 and 25 discussed above and therefore are believed to be allowable over the applied references for at least similar reasons. Because each dependent claim is deemed to define an additional aspect of the invention, the individual consideration of each on its own merits is respectfully requested.

The absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be other reasons for patentability of any or all claims that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment or cancellation of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation.

Allowable Subject Matter

The Office Action states that Claims 8 and 9 would be allowable if rewritten in independent form. Applicant has not rewritten these claims in independent form at this time, as all of the claims in the application are believed to be in a condition for allowance, as discussed above. Applicant is grateful to the Examiner for noting the allowability of these claims, and respectfully submits that Claims 8 and 9 may also be allowable for reasons other than those discussed in the Office Action.

CONCLUSION

In light of the remarks contained herein, Applicant submits that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

Dated: 12/21/2009

By: _____
Kenneth K. Vu, Reg. No. 46,323
(858) 658-5106

QUALCOMM Incorporated
Attn: Patent Department
5775 Morehouse Drive
San Diego, California 92121-1714
Telephone: (858) 658-5787
Facsimile: (858) 658-2502